REMARKS

The present Amendment is in response to the Examiner's Final Office Action mailed June 19, 2008. Claims 1-2 and 12 are amended. Claims 1-14 remain pending in view of the above amendments.

Applicant notes that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claims. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claims and the cited references. Applicant also notes that the remarks presented herein have been made merely to clarify the claimed embodiments from elements purported by the Examiner to be taught by the cited reference. Such remarks, or a lack of remarks, are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicants: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicant reserves the right to challenge the purported teachings and prior art status of the cited references at any appropriate time.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

A. Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1-6 and 8-11 under 35 U.S.C. § 103 as being unpatentable over *Worrall* (U.S. Patent Publication No. 2006/0153177) in view of *Sørhaug* (U.S. Patent No. 6,424,627) and further in view of *NetOptics* (4x1 GigaBit Tap).

The Examiner rejects claim 7 under 35 U.S.C. § 103 as being unpatentable over *Worrall* in view of *Sørhaug* and in view of *NetOptics* (4x1 GigaBit Tap) as applied to claims 1, 2, and 6 above, and further in view of *Tomonaga* (U.S. Patent No. 5,610,913).

The Examiner rejects claims 12 and 13 under 35 U.S.C. § 103 as being unpatentable over *Worrall* in view of *Sørhaug* and in view of *NetOptics* (4x1 GigaBit Tap) as applied to claims 1 and 2 above, and further in view of *Yanacek* (U.S. Patent No. 5,940,376).

The Examiner rejects claim 14 under 35 U.S.C. § 103 as being unpatentable over *Worrall* in view of *Sørhaug* and in view of *NetOptics* (4x1 GigaBit Tap) and in view of *Yanacek* as applied to claim 13 above, and further in view of *Bouthillier et al.* (U.S. Patent No. 6,092,724).

When applying § 103, the Examiner is required to adhere to the following tenets of patent law:

(A) The claimed invention must be considered as a whole;

(B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;

(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

(D) Reasonable expectation of success is the standard with which obviousness is determined. *See* MPEP § 2141(II).

In addition, the Examiner is required to demonstrate that all of the limitations of the claims are taught or suggested in the prior art. *See* MPEP § 2143.03. The following discussion illustrates that the Examiner has not satisfied these requirements.

The Examiner indicates that *Sørhaug* states that "the monitor may interrupt data transfer, not that it must interrupt data transfer to insert data" and that "*Sørhaug* discusses "inserting data without discussing any data disruption." S*ee* Office Action at page 2. As illustrated below, however, these assertions fail to consider the reference as a whole and are applied in a hindsight manner, using the claims as a guide.

The Examiner acknowledges that *Worrall* in view of *Sørhaug* does not explicitly teach where said inserting device data from the different network devices onto the network cable does not disrupt data in the network cable. The Examiner then suggests, that *Sørhaug* discusses inserting data without discussing any data disruption. Applicants respectfully traverse, particularly when considering the reference as a whole.

Sørhaug (with reference to Figures 2 and 3), teaches that the ability to insert data clearly requires a switch from the data to the inserted data. The use of the term "may" in *Sørhaug* is unrelated to whether or not the data is disrupted, but instead conveys the ability to insert data when the related components are switched. In other words, *Sørhaug* may insert data by switching the multiplexers. Thus, while *Sørhaug* shows diagnostic control testing of the channel, it comes only by switching the multiplexers and interrupting the data flow. *See* col. 3, lls. 11-45. Because the multiplexers are switched, the system of *Sørhaug* can only transmit system data **or** diagnostic data – not both at the same time. Thus, the use of the term may only suggest that diagnostic data may be transmitted when the multiplexers are switched. It does not mean or refer, as suggested by the Examiner, to either disrupting or not disrupting the data flow. As a result, the elements of claim 1 are not taught or suggested by the cited art.

More specifically, the Examiner argues that *Sørhaug* states that the monitor *may* interrupt data transfer, not that it must interrupt the data transfer to insert data. The Examiner relies on the statement that "the system monitor or network analyzer can selectively insert data in either direction to provide complete diagnostic testing of the channel." *See* col. 2, lls. 12-14. With this statement, the Examiner suggests that *Sørhaug* discloses both options of either inserting data either disruptively or non-disruptively. However, this characterization is incorrect because it does not consider the reference as a whole and does not reflect what is actually taught.

While the Summary of *Sørhaug* discloses that the "system monitor or network analyzer can selectively insert data in either direction to provide complete diagnostic testing of the channel" as indicated by the Examiner, the Examiner is still required to consider the reference as a whole. In particular, this portion of *Sørhaug* discloses that the ability to insert data is selective. Selective insertion of data, however, cannot be said to suggest that the data can be inserted either disruptively or non-disruptively without first considering the reference as a whole.

Selective insertion of data, as taught by *Sørhaug*, relates to switching the multiplexers to select a different data source. It is not related to the ability to insert data

without disrupting the flow of data in the network cable. In fact, it is apparent that switching the multiplexers, as discussed further below, necessarily interrupts the flow of data in *Sørhaug* because the flow of data in the network is effectively cut off when the multiplexers are switched.

The use of terms like "may" and "selective" must be interpreted by considering the reference as a whole and cannot be used to reject claims without this analysis being performed. *Sørhaug* expounds on "selectively insert data" in the description of at least Figures 2 and 3. When applying the reference as a whole, it becomes apparent that selective does not teach or suggest "without disrupting the flow of data" as recited in claim 1. Rather, it may suggest switching multiplexers to select diagnostic data to replace or instead of network data.

1. Figure 2 illustrates that the data flow is interrupted by providing replacement data instead of system data

For example, Figure 2 of *Sørhaug* illustrates a system for monitoring data from a network medium providing bidirectional data flow between two system devices 51 and 55. *See* col. 2, lls. 41-44. The monitoring is achieved via a media tap and media data links 52A and 52B. *See* col. 2, lls. 44-45.

Sørhaug discloses that "upon control by the media monitor 40, replacement media data via data links 58 and 56 may be inserted on 52A and 52B instead of data from system devices 55 and 51." *See* col. 2, lls. 51-54 (*emphasis added*). This aspect of *Sørhaug* provides additional disclosure describing how the ability of *Sørhaug* to insert data is selective. Replacement data that is inserted instead of data from system devices seems to suggest that, when replacement data is selected, the data from the system devices is interrupted.

In fact, these teachings of *Sørhaug* of inserting replacement media data instead of data from the devices 51 and 55 teaches away from "means for inserting device data received from the different network devices into the network cable through the first and second set of tap ports without disrupting the flow of data in the network cable" as recited in claim 1.

Inserting replacement media data, as taught by *Sørhaug,* suggests that the data flow between the devices 51 and 55 is disrupted, contrary to the assertions of the Examiner.

2. Figure 3 illustrates that data is disrupted because either system data OR diagnostic data is selected using multiplexers

This aspect of inserting replacement data instead of data from the devices 51 and 55 is further illustrated in Figure 3 and described in the accompanying description. For example, if it is desired to send diagnostic data through the link 52B of the channel, the monitor 40 returns, via data link 56, signals to the tap 50. The detected signal then results in a corresponding control signal sent to the link detect circuit 60 which in turn provides a signal to serial multiplexer 100, causing the recovered monitor 40 data and clock signal to be sent to the synchronizing flip-flop 102 for transmission to the system devices 55. *See* col. 3, lls. 11-21.

These teachings illustrate that the data transmitted via the transceiver 64 to/from the device 55 originates either from the transceiver 62 (connected with the device 51) or the monitor 40 via the transceiver 72 – not both at the same time. In this manner, the multiplexer 100 illustrates the ability to select which data is transmitted. Because of the switching that occurs at the multiplexer, the data transfer between the devices 55 and 51 is disrupted.

As a result, the tap 50 taught by *Sørhaug* cannot transmit the diagnostic data without switching the multiplexer 100, an operation that disrupts the data transfer from the device 51. The multiplexer 130 acts similarly to select either the data from the transceiver 64 or from the monitor 40 via the transceiver 58.

Therefore, the teaching of the multiplexer to select either the network data of the diagnostic data illustrates that diagnostic data is transmitted only by disrupting the network data.

In *Sørhaug*, the ability to selectively insert data in either direction relies on multiplexers that disrupt communication between the devices 51 and 55. As a result, *Sørhaug* fails to teach or suggest the element in claim 1 of "means for inserting device

data received from the different network devices into the network cable through the first and second set of tap ports without disrupting the flow of data in the network cable."

For at least these reasons, Applicant respectfully submits that claim 1 is patentable over the cited art. The dependent claims are patentable for at least the same reasons.

3. The dependent claims are patentable over the cited art

For example, claim 12 also recites that the first tap port and second tap port are configured to operate in a plurality of modes, each mode being defined by enabling or disabling the ability of the first tap port and second tap port to receive network data and device data. Claim 12 further differentiates between network data, which is on the network cable, and device data, which is from the attached device. Thus, the first and second tap ports can receive network data from the network and device data from an attached device.

While the Office Action suggests that these elements of claim 12 are taught by *Yanacek*. Applicant respectfully traverses. As more fully discussed below, the network switches of *Yanacek* may be able to monitor data between a source node and a destination node, but there is no teaching or suggestion of inserting device data from an attached device into the network cable.

As indicated in claim 12, the first and second tap ports are configured to operate in a plurality of modes, each mode being defined by enabling or disabling the ability of the first and second tap port to receive network data and device data. The Office Action suggests that *Yanacek* discloses this aspect in Figures 2, 10A-10C.

Figures 2 and 10A-10C, however, actually relate to the ability to establish a connection between a source and/or destination to a probe and to setting up a call-tapping path. *See* Figure 2; col. 5, lls. 45-47. There is no suggestion of device data from the probe that is inserted back onto the network cable as recited in claim 1.

By citing to Figures 2 and 10A-10C, the Examiner is not considering claim 12 as a whole and has not demonstrated that the elements of claim 12 are taught by the cited art. More specifically, claim 12 recites that the device data received by the first and second ports can be inserted back to the network cable. Figures 3, 5, and 8 by way of

example, illustrate this deficiency of *Yanacek*. While the switches illustrated in Figures 3, 5, and 8 are configured to establish a connection path between a source node and a destination mode, data is only transmitted to the probe. Contrary to the elements of claim 1, no data from the probe is inserted back to the network in *Yanacek*. *Yanacek* teaches a probe switch to receive the monitored data. *See* abstract. *Yanacek* teaches that the "originating switch, the probe switch and all intermediate network switches are configured so as to pass data transmitted from at least one of the source node and the destination node to the probe port of the probe switch." *See* col. 2, lls. 21-26.

Thus, there is no teaching or suggestion that the probe port can receive data from the probe (device data) and then insert that device data back into the network cable, as recited in claim 12. Figure 3, for example, further discloses that in a simple case of call-tapping, the probe 118 is attached to the same switch 300 as are the source and destination. *See* col. 6, lls. 25-27. A tap request from the user is sent to switch 300 indicating the addresses of the source and destination nodes. *See* col. 6, lls. 27-30. Once the entry 412 in the tap table 410 is complete, the entries in the connection table 400 for switch 300 must be changed so that data originating from the source S is directed to the port 306 and data originating from the destination D is also directed to the port 306 while maintaining the connection between the source and destination. *See* col. 6, lls. 62-67.

This example illustrates a bi-directional tap in the sense that the probe receives data generated by both the source and the destination. *See* col. 7, lls. 18-25. However, the data received by the probe from the source and the destination is network data – not device data. Thus, there is no teaching or suggestion of enabling or disabling the ability of the first tap port and second tap port to receive both network data and device data.

While the probe receives network data from the source and the destination in *Yanacek,* there is no teaching of receiving device data from the probe. Thus, *Yanacek* teaches that the bi-directional tap is only sending network data from both the source and the destination to the probe. *See* Figures 3, 5, and 8 (the arrow to the probe is unidirectional). In other words, there is no teaching that the probe switch of *Yanacek* includes first and second ports that can be enabled or disabled to receive network data

and device data and there is no teaching or suggestion that the tap is receiving device data from the attached probe.

The modes taught by *Yanacek* relate to setting up a bi-directional tap that can data is received "from the destination D to the source S" (*see* col. 7, lls. 19-20) and "from the source S to the destination D" (*see* col. 7, lls. 15-16). The bi-directional tap only relates to the source and destination nodes on the network, and is not taught to extend to the probe such that device data can be inserted into the network. Further, this does not teach or suggest that the port to the probe has a plurality of modes that are defined by enabling or disabling the ability of the first and second tap ports to receive network data and device data.

In contrast, claim 12 requires: "each mode being defined by enabling or disabling the ability of the first tap port and second tap port to receive network data and device data." There does not appear to be any suggestion or teaching in *Yanacek* that the tap connected to the probe 118 can be enabled or disabled with respect to receiving device data. As illustrated herein, the probe 118 taught by *Yanacek* only receives network data when the probe switch is configured uni-directionally and bi-directionally. There is no teaching or suggestion of device data from the probe that is inserted onto the network cable as recited in claim 1. There is further no teaching or suggestion of inserting the device data without disrupting the flow of data therein.

For at least the reasons discussed herein and because the other references cited by the Examiner have not been shown to remedy the deficiencies of *Worrall, Yanacek,* and *Sørhaug*, Applicant respectfully submits that claim 1 and the dependent claims are patentable over the cited art.

CONCLUSION

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 20th day of October, 2008.

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